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## In the United States Patent and Trademark Office

APR 25 2008

Appellant:	Lee Delson Wilhelm	Docket No.:	19,927
Serial No.:	10/748,650	Group:	3726
Confirmation No:	6898	Examiner:	S. Afzali
Filed:	December 30, 2003	Date:	April 25, 2008
For:	EMBOSSING ROLL AND EMBOSSED SUBSTRATE		

## Appeal Brief Transmittal Letter

Mail Stop Appeal Brief - Patents  
Commissioner For Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Pursuant to 37 C.F.R. 41.37, transmitted herewith is an Appeal Brief pursuant to the Notice of Appeal which was mailed on March 11, 2008.

Please charge the \$510.00 fee (fee code 1402), pursuant to 37 C.F.R. 41.20(b)(2), which is due to Kimberly-Clark Worldwide, Inc. deposit account number 11-0875.

Respectfully submitted,

LEE DELSON WILHELM

By:

  
Gregory E. Croft

Registration No.: 27,542

## CERTIFICATE OF TRANSMISSION

I, Judy Garot, hereby certify that on April 25, 2008 this document is being facsimile transmitted to the United States Patent and Trademark Office, Fax No. (571) 273-8300.

Typed or printed name of person signing this certificate:


Judy Garot

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Appellant: Lee Delson Wilhelm  
Serial No.: 10/748,650  
Confirmation No: 6898  
Filed: December 30, 2003

Docket No.: 19,927  
Group: 3726  
Examiner: S. Afzali  
Date: April 25, 2008

For: EMBOSsing ROLL AND  
EMBOSSED SUBSTRATE

**Brief on Appeal to the Board of Patent Appeals and Interferences**

Mail Stop Appeal Brief - Patents  
Commissioner For Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Pursuant to 37 C.F.R. 41.37 Appellant respectfully submit this Brief in support of the Appeal of the **Final Rejection** of claims 1-16 and 20 which was mailed on December 31, 2007.

On March 11, 2008. Appellant, pursuant to 37 C.F.R. 41.31 mailed a timely Notice of Appeal. Thus, the time period for filing this Brief ends on May 11, 2008.

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**Real Party In Interest**

The real party in interest is Kimberly-Clark Worldwide, Inc., the assignee of record.

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**Related Appeals and Interferences**

There are no known related appeals and/or interferences.

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**Status of Claims**

Claims 1-16 and 20 remain in the application with claims 1-16 and 20 being finally rejected. No claims have been allowed or confirmed, no claims have been withdrawn and claims 17-19 have been cancelled. The appealed claims include 1-16 and 20 and appear in the CLAIMS APPENDIX of this Brief.

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**Status of Amendments**

A Response After Final Rejection was filed on January 18, 2008.

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**Summary of Claimed Subject Matter**

The invention of independent claim 1 is an apparatus including a surface containing at least one elongated curvilinear embossing element with a length of about 0.06 inch or greater (specification at page 2, line 13; page 9, lines 1-3; and Figure 2, reference number 36) and a top comprising a flat surface having a width (specification at page 6, line 33 to page 7, line 4). The embossing element has a first sidewall extending from a base to the top having a first sidewall angle (specification at page 6, lines 18-19). The first sidewall angle has a length perpendicular to the width of the top surface (specification at the sentence bridging pages 6 and 7; and Figure 1). The embossing element has a second sidewall opposing the first sidewall (Figure 1, reference number 27). The second sidewall extends from the base to the top and has a second sidewall angle (specification at page 6, lines 18-19) and has a length perpendicular to the width of the top surface (specification at the sentence bridging pages 6 and 7; and Figure 1). The first sidewall angle is different than the second sidewall angle (specification at page 2, lines 4-5).

The invention of independent claim 2 is an apparatus including a surface containing at least one elongated curvilinear embossing element with a length of about 0.06 inch or greater (specification at page 2, line 13; page 9, lines 1-3; and Figure 2, reference number 36) and a top comprising a flat surface having a width (specification at page 6, line 33 to page 7, line 4). The embossing element includes a pair of exterior first sidewalls disposed at a first sidewall angle and having a length perpendicular to the width of the top surface. The embossing element also has a pair of interior second sidewalls disposed at a second sidewall angle (specification at the sentence bridging pages 6 and 7; and Figure 1) separated by a gap (Figure 3, reference number 48) extending from the top towards the base (see specification at page 7, lines 30-33). The pair of interior second sidewalls has a length perpendicular to the width of the top surface (specification at the sentence bridging pages 6 and 7; and Figure 1). The first sidewall angle is greater than the second sidewall angle by about 5 degrees or more (see specification at page 8, lines 13-16 and Figure 3).

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**Grounds of Rejection To Be Reviewed on Appeal**

**Ground 1:** Whether claims 1-7, 9-10, 12-13, 15-16 and 20 are unpatentable under 35 U.S.C. 103(a) over US 2004/0109911 to Boegli.

**Ground 2:** Whether claims 8, 11, and 14 are unpatentable under 35 U.S.C. 103(a) over US 2004/0109911 to Boegli in view of US 2002/0007749 to Makoui et al.

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**Argument**

Briefly summarizing Appellant's invention, it has been discovered that the clarity or definition of embossed designs in soft tissue products can be improved by providing embossing elements, such as the raised embossing elements on the surface of an embossing roll, with certain geometric features. More particularly, it has been found that curvilinear embossing elements (see Figure 2, reference number 36) having a flat top surface and non-symmetrical sidewall angles result in better pattern definition than that achieved in the prior art. Good pattern definition, which is important for aesthetic reasons, is difficult to achieve in soft tissue products because the dried fibers have a "memory" and tend to return to their previous state after being deflected by embossing elements. A particularly preferred embodiment of the invention also includes a "gap" in the flat top surface of the embossing element, which is illustrated in Figure 3, reference number 48.

**Ground 1: Whether claims 1-7, 9-10, 12-13, 15-16 and 20 are unpatentable under 35 U.S.C. 103(a) over US 2004/0109911 to Boegli.**

Boegli discloses an embossing apparatus comprising at least three embossing rolls, at least one of which consists of multiple "teeth" in the shape of truncated pyramids. It is asserted that it would be obvious to modify the truncated pyramids to provide Appellant's claimed embossing elements. Appellant respectfully disagrees.

Basically, nothing in the teachings of Boegli suggests an embossing roll surface having elongated curvilinear embossing elements. The truncated pyramid-shaped teeth of Boegli are not elongated and they are not curvilinear. There are eleven figures in Boegli and all of them show the embossing elements having the same truncated pyramid-shape. This is not surprising, since Boegli teaches the use of three intermeshing embossing rolls. For such a system, it makes sense to provide each of the engraved rolls with embossing elements that have sidewalls aligned in either the circumferential or axial direction of the rolls as shown. It would be very difficult, and certainly not obvious, to provide elongated curvilinear embossments in one of the three rolls and somehow still be able to have all three rolls mesh together. Instead, if unique embossing shapes are desired, the sketchy teachings of Boegli appear to suggest that certain teeth be modified or eliminated so the sum total of the teeth produces the desired effect. However, embossing rolls containing elongated curvilinear embossing elements would not be obvious from the teachings of Boegli.

Furthermore, Boegli does not teach or suggest different first and second sidewall angles as claimed by Appellant. Instead, the drawings of Boegli appear to show arrays of embossing elements or teeth that are perfectly symmetrical. The opposite sidewalls of each element appear to be disposed at the same angle. While paragraph [0035] of Boegli contains a general statement that "... the design of individual teeth ..... may differ from that of the remaining elements", this statement must be read in the

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context of the teachings of Boegli as a whole. A fair reading of that statement simply means that the dimensions of the elements can be altered, but the result would still be an array of truncated pyramid-shaped "teeth" that intermesh with the linear ridges and valleys of the other two embossing rolls. Consequently one of ordinary skill in the embossing art, upon reading Boegli, would not find it obvious to provide elongated curvilinear embossing elements with differing sidewall angles as claimed by Appellant. Finding otherwise could only be achieved using hindsight based upon the teachings of Appellant's specification, and it would effectively mean that all embossing element designs are obvious from the narrow teachings of Boegli. It is Appellant's belief that such an interpretation would be unreasonable.

In addition, it is submitted that Appellant's claimed embossing element design provides an unexpected result in that one of ordinary skill, reading the teachings of Boegli, would not expect that providing elongated curvilinear embossing elements with a flat top surface and differing sidewall angles would provide improved embossing clarity and definition. While Boegli appears to be directed at achieving some sort of visual or optical effects in the embossed foils or films, there is no suggestion that embossing clarity or definition is in any way related to whatever optical effect is being sought by Boegli.

#### Further Discussion of Claim 2

With specific reference to Appellant's independent claim 2, there also is no suggestion in the teachings of Boegli to provide a split elongated curvilinear embossing element having a "gap" as claimed. The truncated pyramid elements of Boegli do not have a gap, but instead have a very small uninterrupted flat top surface. It would not be obvious to provide the embossing elements of Boegli with a gap as claimed for at least two reasons. First, there is no teaching or suggestion that such a feature would be beneficial. Second, as a practical matter, the small available space on the top surface of the teeth of Boegli would not appear to even allow sufficient space for a gap. Since Boegli does not teach any dimensions, to suggest there is sufficient space would be pure speculation.

#### Further Discussion of Claims 4-7, 9-10, 12-13, 15-16 and 20

With regard to the specific dimensions or angles claimed in Applicant's claims 4-7, 9-10, 12-13, 15-16 and 20, there is no teaching or suggestion by Boegli to provide embossing elements as claimed. As mentioned above, there are no teachings in Boegli regarding dimensions, so to suggest that the specific dimensions and angles claimed by Appellant are obvious could only be based on pure speculation. They would not be obvious to one of ordinary skill upon reading Boegli.

In addition to the significant fundamental structural differences between the truncated pyramid embossing elements of Boegli and the elongated curvilinear embossing elements of Appellant's invention discussed above, the apparatus of Boegli is intended for an entirely different purpose than

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that of Appellant's apparatus. Specifically, while Appellant's apparatus is intended for embossing soft tissue paper to impart better pattern definition, the apparatus of Boegli is intended for "embossing and/or satinizing foils" (paragraph [0001] ) in order to provide visual effects that are more difficult to copy for security purposes (paragraph [0013] ). Clearly the properties of foils are different than the properties of soft tissues. Furthermore, embossing foils for purposes of "optical effects", whatever that means, is not suggestive of embossing soft tissues in a manner to provide better pattern definition. Hence what might be an obvious matter of design choice for purposes of Boegli would not be useful or relevant for Appellant's apparatus, which is designed for a very different purpose. As such, it would not be obvious to provide an embossing apparatus as taught by Boegli with embossing elements having the claimed specific features set forth in the above-mentioned dependent claims.

**Ground 2: Whether claims 8, 11, and 14 are unpatentable under 35 U.S.C. 103(a) over US 2004/0109911 to Boegli in view of US 2002/0007749 to Makoui et al.**

Dependent claims 8, 11 and 14 stand rejected under 35 U.S.C. 103(a) as unpatentable over Boegli in view of US 2002/0007749 to Makoui et al. Without addressing the merits of this basis for rejection, Appellant believes these claims to be patentable for the same reasons discussed above with respect to the other claims.

**Conclusion**

For the reasons stated above, it is Appellant's position that the grounds for rejection are not proper and should be reversed by the Board.

Please charge the \$510.00 fee (fee code 1402), pursuant to 37 C.F.R. 41.20(b)(2), for filing this Appeal Brief to Kimberly-Clark Worldwide, Inc. deposit account number 11-0875. Any additional prosecutorial fees which are due may also be charged to deposit account number 11-0875.

The undersigned may be reached at: (920) 721-3616.

Respectfully submitted,

LEE DELSON WILHELM

By: 

Gregory E. Croft

Registration No.: 27,542

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CERTIFICATE OF TRANSMISSION

I, Judy Garot, hereby certify that on April 25, 2008, this document is being facsimile transmitted to the United States Patent and Trademark Office, Fax No. (571) 273-8300.

Typed or printed name of person signing this certificate:

Judy Garot

Signature:

Judy Garot

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**Claims Appendix**

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**APR 25 2008**

The claims on appeal are:

1. An apparatus comprising:

a surface containing at least one elongated curvilinear embossing element having a length of about 0.06 inch or greater and a top comprising a flat surface having a width;

the embossing element having a first sidewall extending from a base to the top having a first sidewall angle, said first sidewall having a length perpendicular to the width of the top surface, and a second sidewall opposing the first sidewall, the second sidewall extending from the base to the top and having a second sidewall angle, said second sidewall having a length perpendicular to the width of the top surface; and

wherein the first sidewall angle is different than the second sidewall angle.

2. An apparatus comprising:

a surface containing at least one elongated curvilinear embossing element having a length of about 0.06 inch or greater and a top comprising a flat surface having a width;

the embossing element including a pair of exterior first sidewalls extending from a base to the top disposed at a first sidewall angle, said pair of exterior first sidewalls having a length perpendicular to the width of the top surface, and a pair of interior second sidewalls separated by a gap extending from the top towards the base, said pair of interior second sidewalls having a length perpendicular to the width of the top surface, the pair of interior second sidewalls disposed at a second sidewall angle; and

wherein the first sidewall angle is greater than the second sidewall angle by about 5 degrees or more.

3. The apparatus of claim 1 or 2 wherein the embossing element comprises a male embossing element.

4. The apparatus of claim 1 wherein the first sidewall angle is greater than the second sidewall angle by about 5 degrees or more.



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5. The apparatus of claim 1 or 2 wherein the first sidewall angle is greater than the second sidewall angle by about 15 degrees or more.
6. The apparatus of claim 1 or 2 wherein the second sidewall angle is about 10 degrees or less.
7. The apparatus of claim 1 or 2 wherein the second sidewall angle is about 5 degrees or less.
8. The apparatus of claim 7 wherein the embossing surface comprises a metal roll.
9. The apparatus of claim 1 or 2 wherein the first sidewall angle is about 10 degrees or more.
10. The apparatus of claim 1 or 2 wherein the first sidewall angle is about 15 degrees or more.
11. The apparatus of claim 10 wherein the embossing surface comprises a metal roll.
12. The apparatus of claim 2 wherein the gap between the pair of interior sidewalls at the top of the embossing element is less than 0.030 inch.
13. The apparatus of claim 2 wherein the gap between the pair of interior sidewalls at the top of the embossing element is between about 0.005 inch to 0.030 inch.
14. The apparatus of claim 2 wherein the embossing surface comprises a metal roll.
15. The apparatus of claim 2 comprising a top radius joining each sidewall to a top of the embossing element and wherein the top radius for the pair of exterior first sidewalls is different than the top radius for the pair of interior second sidewalls.
16. The apparatus of claim 15 wherein the top radius for the pair of exterior first sidewalls is greater than the top radius for the pair of interior sidewalls.

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20. The apparatus of claim 2 wherein the first sidewall angle is about 15 degrees or more, the second sidewall angle is about 5 degrees or less, the gap between the pair of interior sidewalls at the top of the embossing element is between about 0.005 inch to 0.030 inch, and the embossing surface comprises a metal roll.

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**Evidence Appendix**

No evidence appendix is submitted with this Appeal Brief.

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**Related Proceedings Appendix**

There are no known related appeals and/or interferences.

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